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HEALTH  
ENVIRONMENT  
AND CLIMATE  
TURKEY

BRIEFING:

# Awareness and engagement of the health sector on climate change, with a focus on Turkey



# 1- Introduction

Ever since the renowned Lancet medical journal started highlighting the health implications of climate change in 2009, the awareness and engagement of the health sector has been growing. This briefing aims to shed light on why “health” is at the heart of climate change and present some of the milestones of health sector engagement on climate. In addition, results of a survey on health professionals awareness on climate change and health will be presented, with a focus on Turkey, Serbia and the European region. Given that climate change is the biggest health threat of the 21<sup>st</sup> century, the health sector should continue to be engaged in communicating the science, raising the awareness, and in mitigation and adaptation efforts.

## What’s at stake for health in climate change?

The science on the health impacts of climate change has been steadily growing, and its impacts are increasingly being felt in Europe: Climate change is driving more intense and frequent climate-related extreme weather events in Europe and Turkey, with both direct and indirect health impacts, loss of infrastructure, and economic costs.<sup>1,2</sup>

**Between 2011 and 2020, 55% of the European regions experienced extreme-to-exceptional summer droughts, and climate-related extreme events were associated with record economic losses in 2021, totaling almost €48 billion.**<sup>1</sup> Rising temperatures, increasing hot days, and changing precipitation patterns are already being observed in Turkey. The percentage of hot days is projected to increase significantly, compared to around 15% of all days between 1981 and 2010.<sup>2</sup>

## Europe’s particular vulnerability to heat



Because of its aged population, Europe is particularly vulnerable to health effects related to heat. It is estimated that in the record heat summer in 2003, 70.000 people lost their lives. Globally, the past eight years have been the warmest on record, and the summer of 2022 was the warmest recorded for Europe ever.<sup>3</sup> **The analysis of the health impacts of last year’s record temperatures and extreme weather events is still ongoing: a new analysis of the health impacts of the 2022 summer temperatures concludes that more than 61,000 people lost their lives because of heat.**<sup>4</sup>

New studies also point out that air pollution increases the health impacts from heat: more people in Europe die from respiratory or heart disease when temperatures are high and air quality is poor.<sup>5</sup>

The changing environmental conditions also raises the risk of transmission for various infectious diseases. An increasing percentage of coastal waters in Europe is showing suitable conditions for the transmission of pathogenic non-cholera Vibrio. **The climatic suitability for the transmission of dengue has increased by 30% in the past decade compared with the 1950s, and the risk of West Nile virus outbreaks has increased by 149% in southern Europe and 163% in Central and Eastern Europe from 1986 to 2020 compared with 1951 to 1985.**<sup>1</sup>

## 2- The risk of vector-borne and zoonotic diseases in Turkey

Changes in vector distribution as a result of climate change, deforestation, habitat change, and ecosystem destruction and degradation may increase the number of cases of vector-borne and zoonotic infections in Turkey, too. There is a risk of increasing incidence of sandfly and mosquito-borne diseases, such as cutaneous and visceral leishmaniasis, and West Nile virus infection, which currently have local transmission. In addition, there is a risk of spreading malaria, Zika virus disease, dengue virus infection, chikungunya fever, and yellow fever diseases, which currently have no local transmission but imported cases are being reported. In certain regions of Turkey, invasive *Aedes* species, which are the main vectors of such diseases, have been detected. Zoonotic diseases such as Crimean-Congo hemorrhagic fever, hantavirus infection, leptospirosis, Lyme disease, and Q fever, which currently have local transmission, could spread to regions where these diseases have not been observed before.<sup>2</sup>

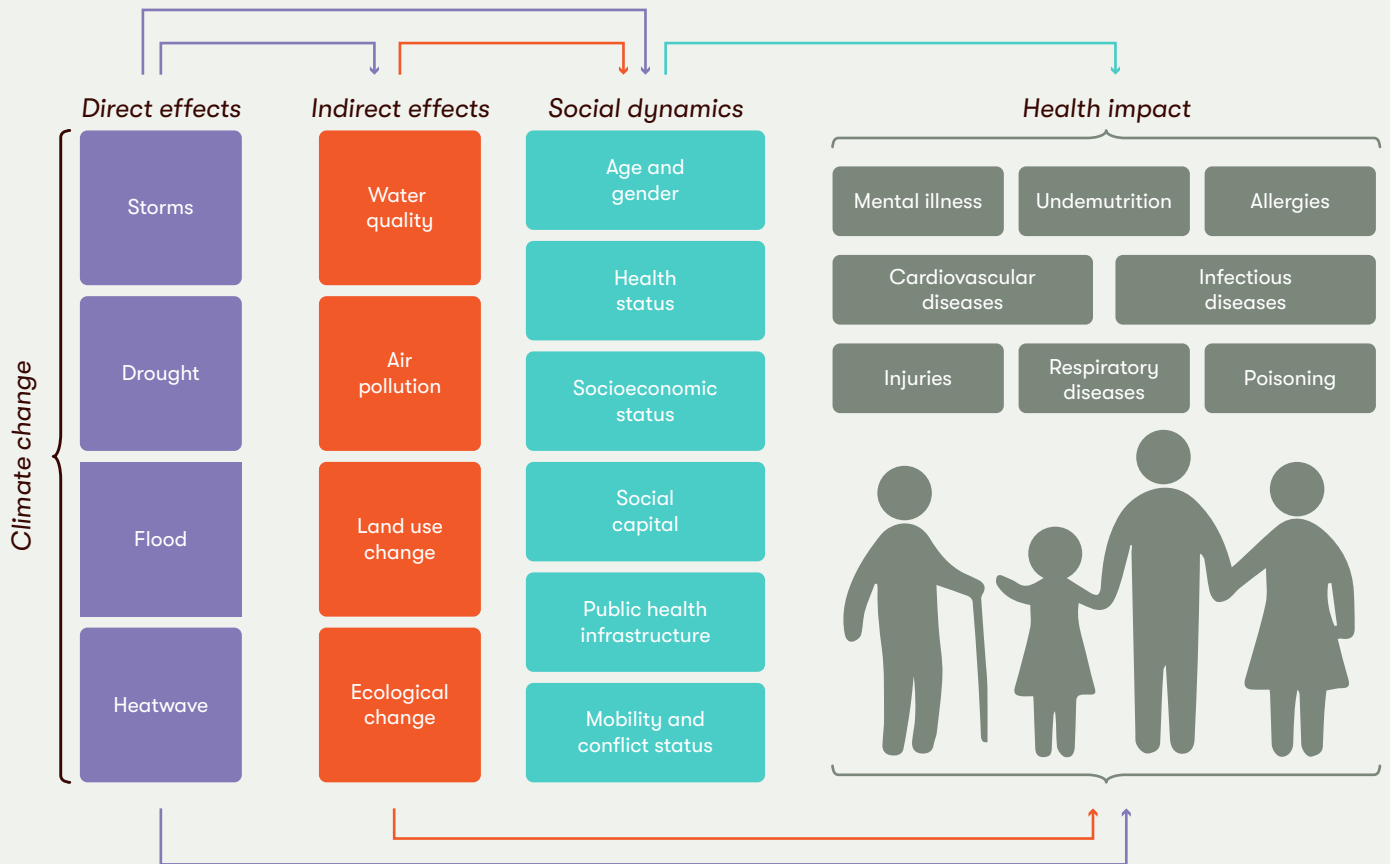


Figure 1. The direct and indirect effects of climate change on health and wellbeing.<sup>6</sup>

## 3- The health co-benefits of tackling climate change



Alarming increases in health-related hazards, vulnerabilities, exposures, and impacts from climate change across Europe show the urgent need for ambitious mitigation targets that restrict the global temperature rise to less than 1.5°C above pre-industrial levels, and effective adaptation strategies to build resilience against the increasing health threats of climate change.<sup>1</sup>

The Lancet Countdown on Climate Change has repeatedly pointed out the significant health benefits which would be gained from taking measures to limit global temperature rise, and the win-wins which could be achieved for health and climate.

These benefits will be accrued through transformations in all the relevant sectors which currently contribute to climate change with CO<sub>2</sub> or other climate-forcing emissions:

- In the energy sector: phasing out the burning of coal, oil and gas will clean up the air, leading to immediate and long-lasting improvements in people's health (including less medication needed, less hospital admissions, less sick days, less premature deaths).
- In the transport sector: prioritizing walking & cycling, and building up public transportation and zero emission mobility will reduce emissions of CO<sub>2</sub> and air pollutants, thus strengthening health. Further benefits will be gained as people are more physically active.
- In the agricultural sector: moving to a planetary health diet with reduced meat consumption will not only decrease CO<sub>2</sub>, methane and other emissions but also strengthen overall health.
- In the household sector: reducing the carbon footprint through energy efficiency renovations can help to protect people's health from either heat or cold temperatures, and switching to renewable and energy savings brings further benefits from reduced pollution.
- In the industrial sector: phasing out the burning of coal, oil and gas will clean up the air, leading to immediate and long-lasting improvements in people's health (including less medication needed, less hospital admissions, less sick days, less premature deaths).

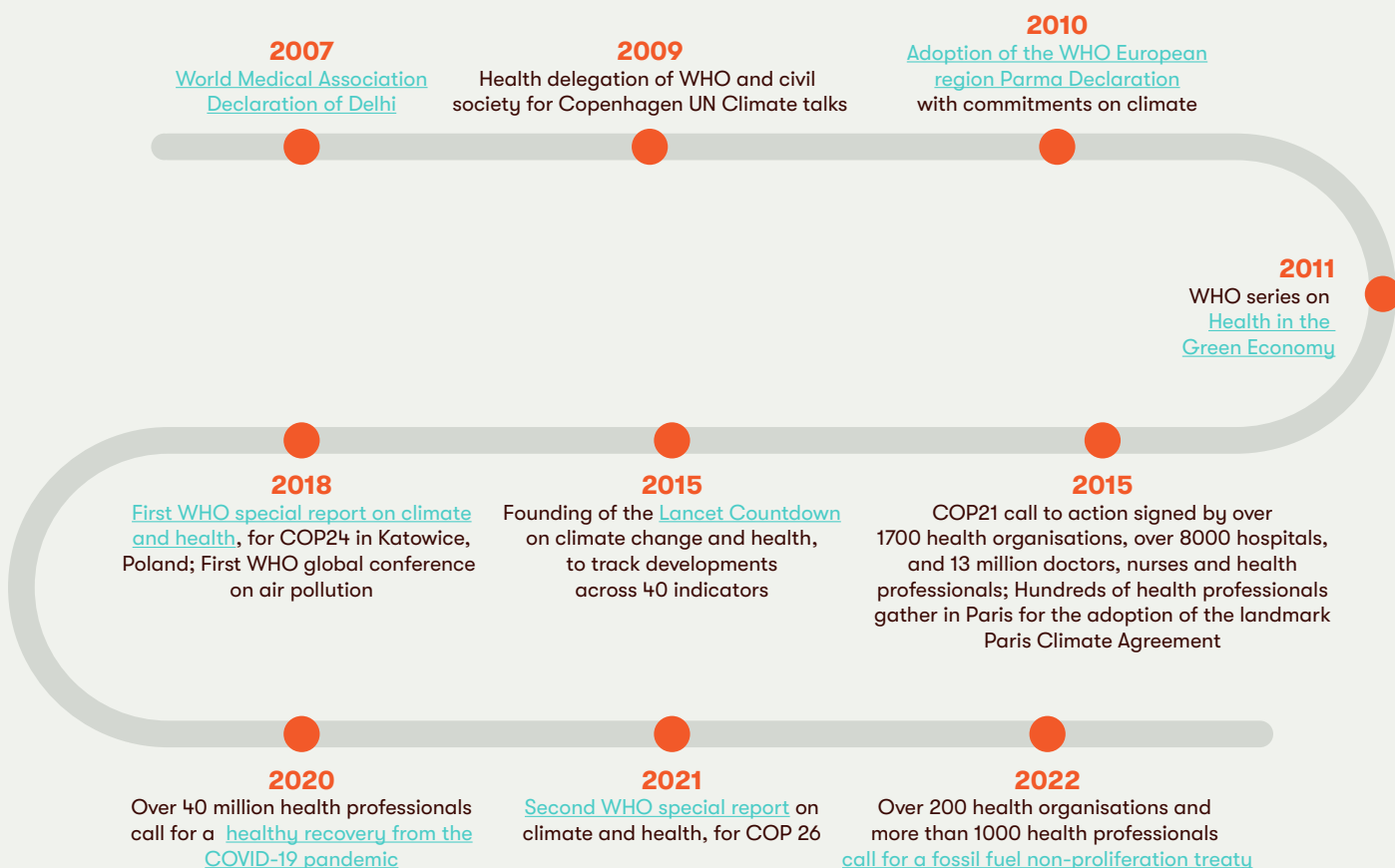
### Growing health sector concern and engagement on climate

Ever since the renowned Lancet medical journal started highlighting the health implications of climate change in 2009, the awareness and engagement of the health sector has been growing.

In just a little over a decade, health sector engagement has risen from a small number of individuals and organizations active to thousands of organizations and individuals active on mitigation and adaptation around the world.

In this, the work of the World Health Organization (WHO) as well as civil society health organisations, of individuals and institutes has been instrumental.

Milestones in health sector engagement include:



The World Medical Association (WMA) underlines the important role physicians and other health professionals play in all aspects of climate action and encourage governments to take action, including:

- Climate mitigation, recognizing the crucial health co-benefits.
- Adaptation to health impacts of climate change, including investment in health systems strengthening.
- Development of a loss and damage framework to address disparate health inequities attributable to climate change.
- Health sector engagement in the implementation and review of national-level commitments.<sup>7</sup>

A number of position papers highlight the moral and ethical duties of healthcare professionals to come up with an effective public health response, including disseminating accurate information on the health impact of climate change to patients and populations and advocating at the policy level for structural changes.<sup>8</sup>

The window for halting global warming to 1.5 degrees Celsius, as agreed in the Paris Agreement is still open, but urgent action is needed in this decade.

Keeping this limit will depend on the decisions made by each country, organization, and individual in the coming years. Physicians, too, as advocates for their patients and citizens, have an ethical obligation to get involved in this global movement.

## 4- Health sector awareness and engagement on climate in Turkey, Serbia, and EU countries: Survey results

As part of the CISIP project, we carried out a survey in 2023 with health sector participants to investigate the level of knowledge on climate change and health, their concern and engagement, using a 26 question online questionnaire. A total of 507 doctors and health professionals from Turkey, Serbia, and EU countries participated in the survey, with the majority of responses gathered from Turkey.

The results confirm the increasing level of awareness and concern among the health sector, with the majority recognizing the importance of addressing the health effects of climate change. However, there were some differences in attitudes and concerns.

The findings suggest a need for continued education and capacity-building initiatives to empower health professionals in effectively addressing climate-related health challenges.

### Demographic Characteristics

Of the 507 physicians who participated in the survey, 71.6% were from Turkey. Another 19.5% were from Serbia, and 8.9% from European countries.

The participants in our study were distributed in terms of gender in favor of women. While 58% were female, 42% were male. Of every 100 respondents, 14 were under 30 years old, 25 were 30-39, 19 were 40-49, 25 were 50-59, and 17 were 60 and older.

Of the physicians who responded to the questionnaire, 34% were clinicians, 25% were public health specialists, and 20% were general practitioners. A considerable proportion of residents/assistants also participated in the study. A small number of physicians specializing in basic sciences and physicians from other fields were included in the study.

Most of the doctors (23%) were working in a primary health care facility. This was followed by the public university/health institute (20%) and the public university hospital (20%).

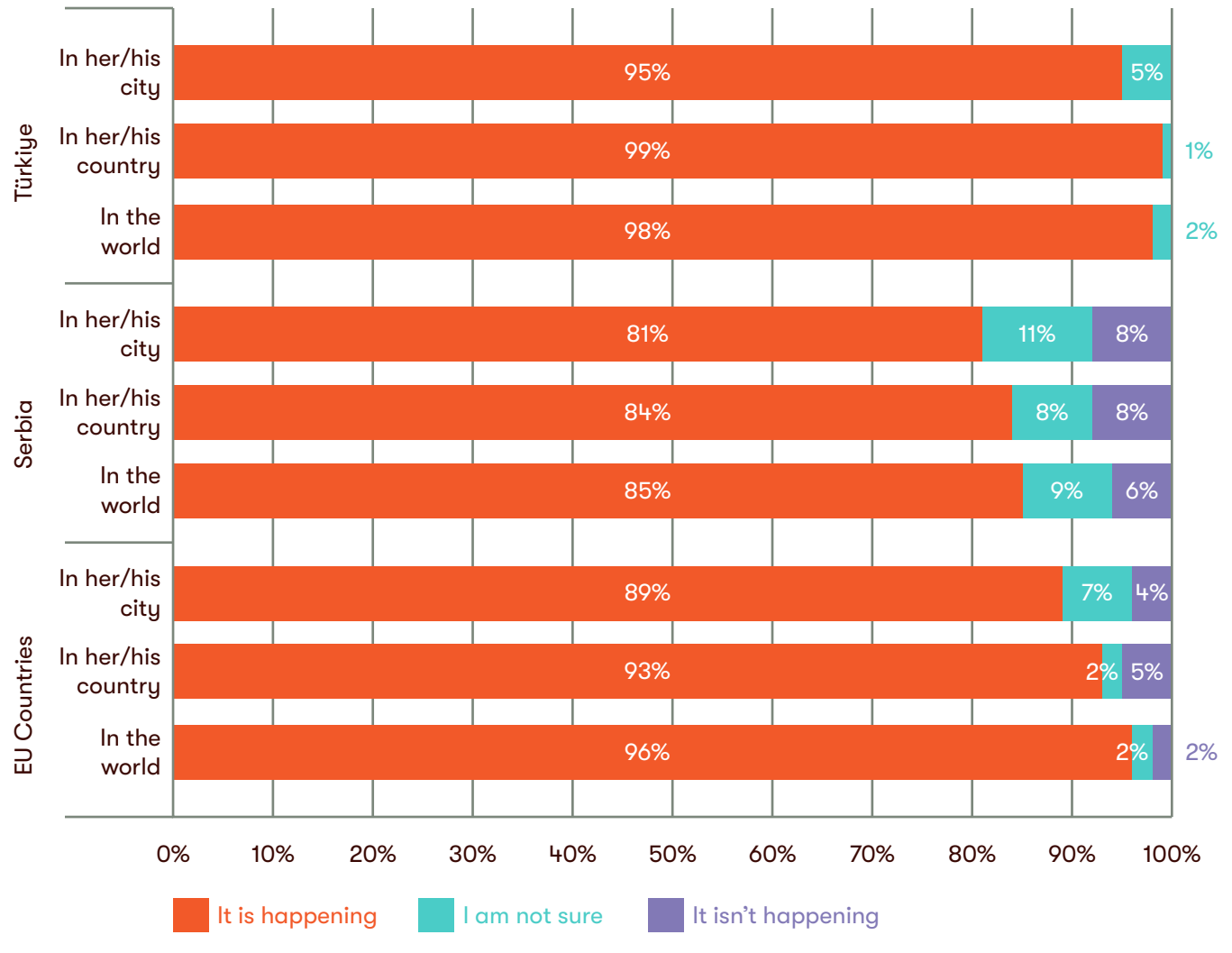
Half of the respondents reported working as health professionals for more than 20 years. 15% have worked as health professionals for 10-19 years, 16% for 5-10 years, and 18% for less than five years.

Most respondents (64%) reported living in a metropolitan area or a big city. While 25% live in small cities, 11% live in counties or villages.

### Awareness about the changing climate and extreme weather events

**Regarding whether global warming is happening, all respondents show a high level of awareness on climate change, with the highest level of awareness in Turkey, for city, country and global level.** The level of awareness is slightly lower in Serbia.

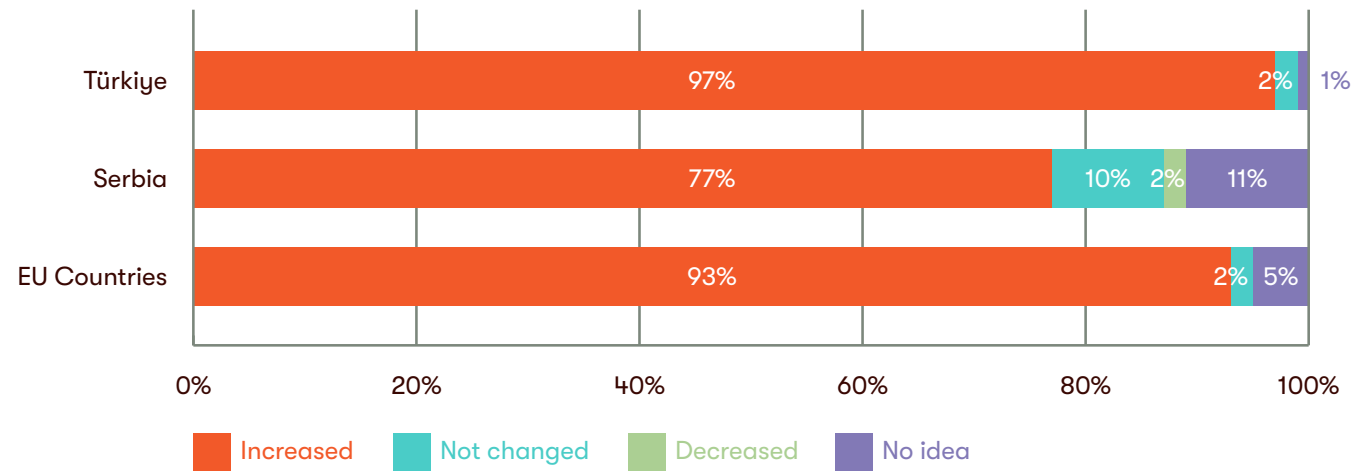
Do you think global warming is happening?



In response to the question “Is global warming happening?”, participants from all countries answered that it is happening at a high rate. Most participants from Turkey reported that global warming is happening in the world, in their countries and in the city where they live. Participants from Serbia have a lower level of global warming awareness than the others.

There is also a larger group of health professionals in Serbia who think that extreme weather events haven't increased in their country, while the majority of respondents from Turkey and EU countries think this is the case.

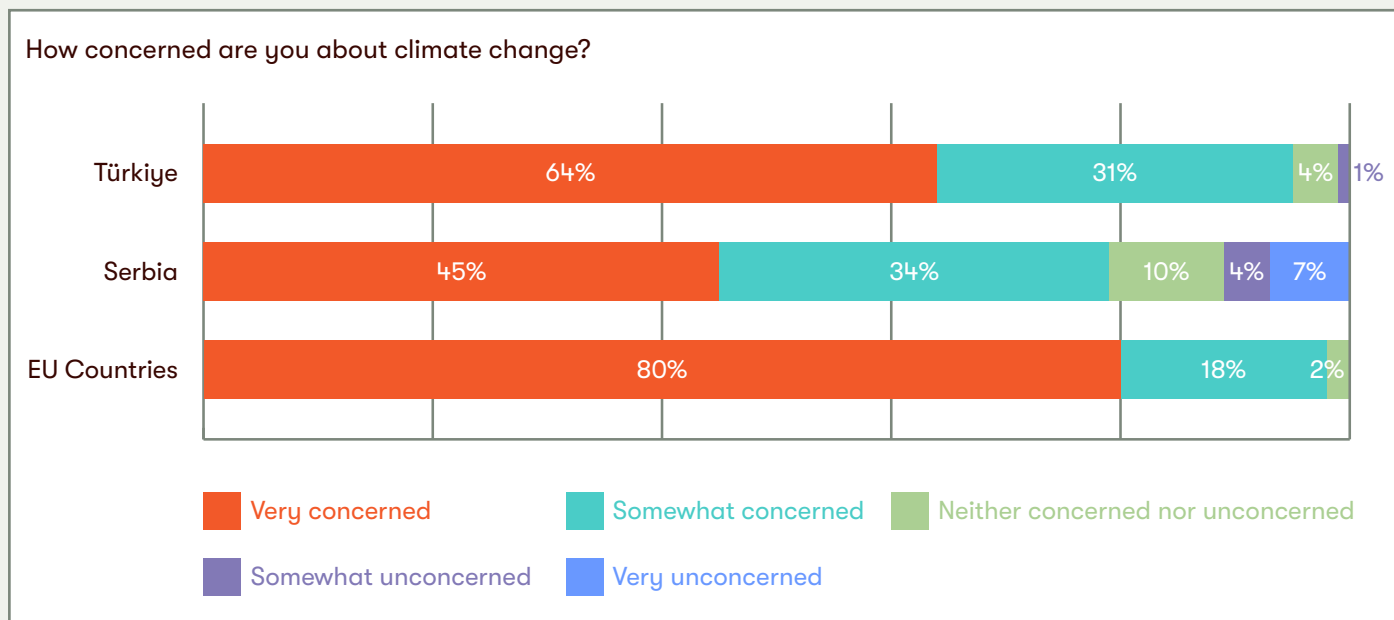
Do you know, if extreme weather events such as flood, storms, extreme temperatures, and droughts increased or decreased in your country recently?



When asked about the recent occurrence of extreme weather events in their country, most respondents from all three countries answered that it had increased. However, respondents from Serbia answered “increased” to a lesser extent than respondents from Turkey and EU countries.

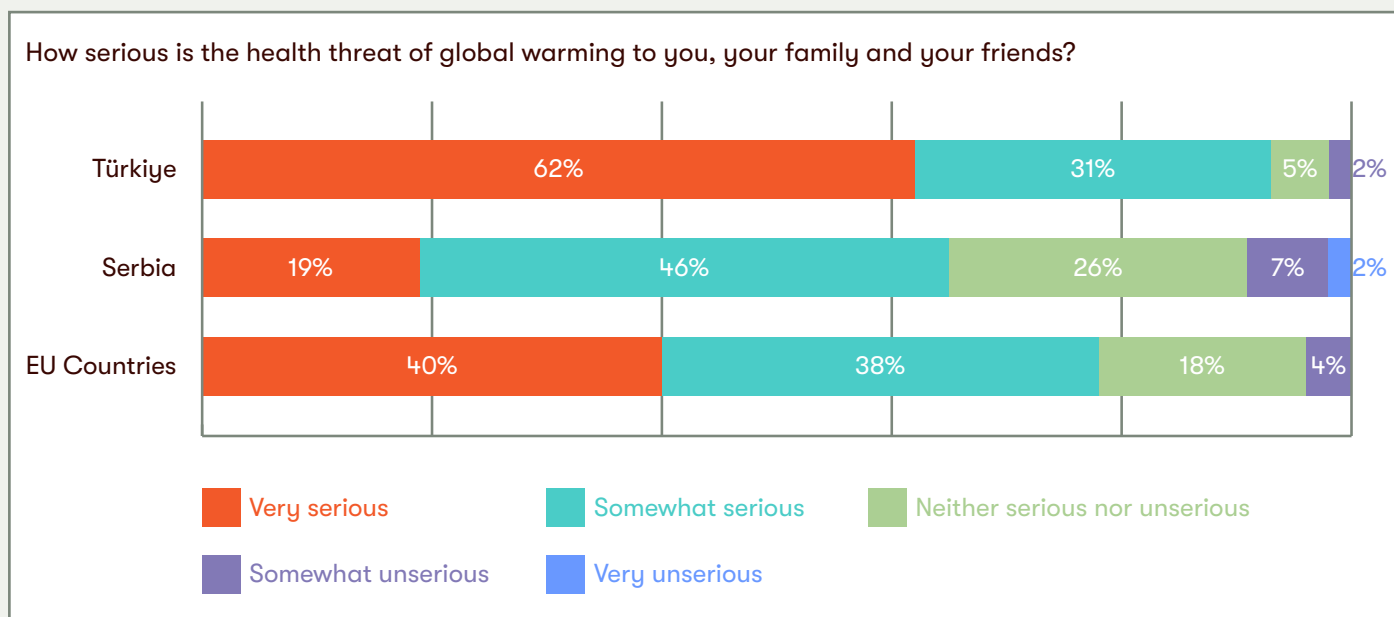
### Concern about climate change and the health threat

The majority of respondents from Turkey and the EU countries show a high level of concern about climate change, with 64% and 80% respectively, there is less concern among the health sector in Serbia, with only 45% expressing that they are worried.



When asked how serious is global warming for you, your family, and friends, 78% of EU countries and 65% of respondents from Serbia answered that it is very serious/somewhat serious. **Physicians from Turkey who participated in our study were much more likely (93%) to say that they see global warming as a threat compared to other countries.**

This lower level of concern also links to considering climate change as less of a threat for oneself, family and friends, with one fifth of Serbian health professionals considering the threat as very serious, compared to 40% from EU countries, and 62% from Turkey.



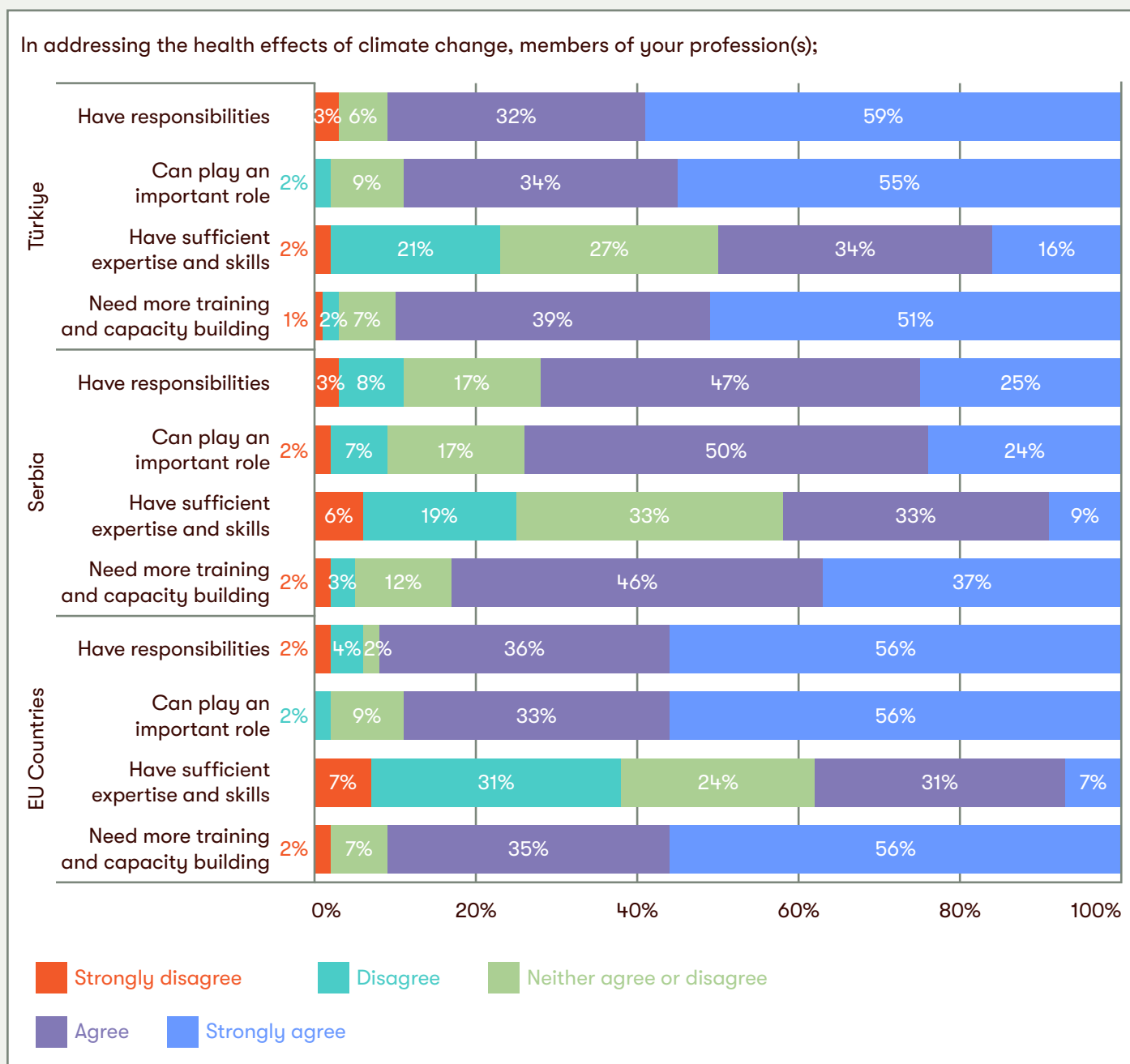


## The role and responsibilities of the health sector

When we asked whether health professionals have responsibilities and an important role in addressing the health effects of climate change, respondents from Turkey stated that they strongly agree and agree (91% and 89%, respectively). Similar responses were received from respondents from EU countries (93% and 89%, respectively).

On the other hand, Serbian respondents indicated that they strongly agreed & agreed with 72% that health professionals have a responsibility and 74% that they can play an important role in addressing the health effects of climate change.

50% of respondents from Turkey, 42% from Serbia, and 38% from EU countries indicated that the expertise and skills of their profession's members in addressing the health effects of climate change are sufficient. Participants from Turkey, Serbia, and EU countries strongly agreed that members of their profession need more training and capacity to address the health effects of climate change.



# 5- Recommendations for the engagement of health sector in Turkey and in the European region



## 1. Strengthen Collaboration and Information Sharing

Establish robust networks and platforms for collaboration between the health sectors of Turkey, the Balkans, and European countries. This could involve sharing best practices, research findings, and policies related to climate change and health. Regular meetings, conferences, and workshops can facilitate dialogue and knowledge exchange, enabling both regions to learn from each other's experiences and successes.

## 2. Enhance Climate Change Resilience in Healthcare Facilities

Invest in improving the resilience of healthcare facilities in Turkey and Europe to climate change impacts. This includes ensuring climate proofing of the healthcare sector, reliable access to clean energy sources, implementing measures to adapt to extreme weather events (such as floods, heatwaves, and storms), and integrating climate change considerations into infrastructure planning. By making healthcare facilities more resilient, they can continue to provide essential services during climate-related emergencies.

## 3. Promote Public Awareness and Education

Increase public awareness and education activities on the health impacts of climate change. This can involve disseminating information through various channels, including social media, public health initiatives, and educational programs. Emphasize the linkages between climate change and health issues such as air pollution, vector-borne diseases, heat-related illnesses, and mental health. Empower individuals and communities to take action to protect their health in the face of climate change.

## 4. Support Research and Data Collection

Invest in research initiatives and data collection efforts to understand the specific health impacts of climate change in Turkey and Europe. Foster collaborations between academic institutions, public health agencies, and research organizations to conduct studies on topics such as climate-related diseases, environmental determinants of health, and the effectiveness of adaptation measures. Robust scientific evidence can guide policy-making and ensure that health interventions are evidence-based and effective.

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# About the Project

This briefing has been published as part of the CISIP project.

The Environment, Climate and Health Cooperation Project (ÇİSİP in Turkish) was launched by the Health and Environment Alliance (HEAL), HASUDER (Association of Public Health Professionals - Turkey) and Kocaeli University Department of Public Health in April 2020. Funded by the European Union, CISIP's aim is to bring together all environmental health actors in Turkey and to support health professionals in the fields of environmental and climate policies.

The Environment, Climate and Health Cooperation Project will continue until July 2023 and aims to:

- Establish a collaborative platform on the environment and climate change for all health professionals.
- Organize online trainings, provide mobile training seminars and courses for medical students on the environment and climate change with a public health perspective.
- Create a dialogue between health professionals in Turkey, professional organizations, non-governmental organizations and think tanks in Europe.
- Produce environmental, climate change and health content, briefs and training materials directed to health professionals.



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the European Union**

## Disclaimer

HEAL gratefully acknowledges the financial support of the European Union for the production of this publication. The responsibility for the content lies with the authors and the views expressed in this publication do not necessarily reflect the views of the EU.

HEAL's EU Transparency Register Number: 00723343929-96

This briefing is part of the Environment, Climate and Health Cooperation Project (ÇİSİP in Turkish) lead by the Health and Environment Alliance (HEAL), HASUDER (Association of Public Health Professionals-Turkey) and Kocaeli University Department of Public Health. The project was launched in April 2020 and will end in July 2023.

The results of the survey presented in this briefing were brought together with the support of Prof. Dr. Marija Jevtic, University of Novi Sad, EUPHA.

### Date of Publication

June 2023

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